

REMARKS

An objection is made with respect to claim 7. This claim has been amended in a manner that is respectfully believed to fully obviate this claim objection by having same depend on claim 1, which now specifies a different w:w % range. Claim 6 likewise is cancelled. Reconsideration and withdrawal thereof are respectfully requested.

Each of independent method claim 1 and composition claim 13 are amended to specify that the calcium sulfate dihydrate DSG particles are present within the range of about 5 to 50% w:w of the calcium sulfate hemihydrate, support therefor being found, for example, in original claims 6 and 15, now cancelled. Claims 1 and 13 also specify that the calcium sulfate dihydrate DSG particles comprise an inert particulate filler which improves acoustic properties of the wallboard. Support for same is found, for example, in paragraph [0050] of applicants' published application.

Claim 1 is revised to state the sheets prepared are formed as gypsum wallboard by setting of the slurry. Support and meaning can be appreciated from paragraph [0038] and its statement "slurry sandwiched between two sheets of paper," as well as paragraph [0039] which states, "guides maintain the

board thickness ... as the setting slurry travels on the moving conveyor belt." In addition, paragraph [0035] states that the plasterboard manufacture process is well known in the art. Thus, step (c) of claim 1 clarifies that the gypsum wallboard is made by the conventional process of setting the slurry, rather than by a process (of prior art such as Deleuil) wherein the gypsum material is molded through compression. As noted in the previous Amendment, compression is unnecessary and undesirable for wallboard manufacture. Wallboard manufacture is the subject of the present claims. It is respectfully intended that this revision of claim 1 will help to distinguish between wallboard manufacture by setting of the slurry (as claimed) and compression molding (which is the province of Deleuil).

Claims 1-7, 9, 13, 15, 16, 21 and 22 are rejected under 35 U.S.C. §102(b) from Deleuil U.S. Patent No. 4,221,599. Claims 17 and 18 are rejected under 35 U.S.C. §103(a) from Deleuil. Claims 12 and 19 are rejected under 35 U.S.C. §103(a) from Deleuil in view of Marcoux et al. U.S. Patent No. 5,980,627.

Observations made in the Office Action with respect to claims 6 and 15 are considered to have been made against presently amended claims 1 and 13 inasmuch as the subject matter of now-cancelled claims 5 and 16 has been incorporated into

claims 1 and 13, respectively. In the context of claims 5 and 16, claiming 5 to 50 percent w:w as the percentage of the calcium sulfate dihydrate particles of desulphogypsum (DSG), based on the weight of the calcium sulfate hemihydrate (stucco), the Office refers to lines 39-42 of column 5 of Deleuil, stating that the proportion of plaster in the gypsum and plaster mixture of Deleuil is between 30 and 99 weight percent. Applicants understand the Office to rely upon this paragraph of Deleuil for teaching a mixture of gypsum and plaster wherein the gypsum of Deleuil comprises between 1 and 60 weight percent of the gypsum and plaster mixture, preferably between 40 and 70 weight percent gypsum. Because Deleuil is in the art of compression molding requiring applying a compaction of pressure, and because Deleuil has no teaching concerning improving acoustic properties of wallboard, there is no recognition, disclosure or teaching in Deleuil of the properties of applicants' invention and the relationship thereof to the amount of calcium sulfate dihydrate DSG particles present in a slurry that sets into gypsum wallboard having improved acoustic properties.

The combination of features of independent claims 1 and 13 possess unexpected technical merit that indicates both novelty and unobviousness. Applicants respectfully refer to their

EXAMPLE 1 showing that 20 weight percent and 25 weight percent calcium sulfate dihydrate DSG particles realize a water savings advantage without detrimental effects on production of plasterboard, a decided advantage. EXAMPLE 2 reports that the inclusion of 20 weight percent calcium sulfate dihydrate DSG particles in the slurry for making wallboard by setting is as good as or better than natural rock for sound reduction.

EXAMPLE 3 reports that calcium sulfate dihydrate DSG particles at 10 weight percent and 20 weight percent w:w of calcium sulfate hemihydrate have no detrimental effect on setting times.

Accordingly, when applicants' claimed invention as in claims 1 and 13 is considered as a whole and as claimed, Deleuil neither anticipates nor renders obvious claim 1 or claim 13.

Concerning current claim 7 (dependent upon claim 1) and current claim 16 (dependent upon claim 13), these claims specify contents of calcium sulfate dihydrate DSG particles are at ranges narrower than their respective independent claims, further distinguishing and supporting unobviousness from Deleuil. This same observation for novelty and unobviousness applies to claims 9, 17 and 18.

Concerning the remaining claims that are presently rejected by Deleuil alone, namely claims 2-5, 21 and 22, each such claim

is ultimately dependent upon either claim 1 or claim 13 as presently amended, and the novelty and unobviousness thereof are present due to such dependencies.

Marcoux is added to Deleuil for the \$103 rejection of claims 12 and 19. Each of these claims is presently amended in order to specify that the additional bulk provided by the crushed existing gypsum wallboard improves the acoustic properties of the wallboard. Support for this claim revision is found at paragraph [0045] of applicants' published application. The Office does not suggest that Marcoux discloses or teaches this feature. Reconsideration and withdrawal of this \$103 rejection of claims 12 and 19 are accordingly respectfully requested.

In the Response to Arguments portion of the present Office Action, the Office refers to evidentiary reference Roth et al. U.S. Patent No. 5,362,471. The Office takes the position that Roth teaches that gypsum flakes are created by a method commonly used by wallboard manufacturers in which the gypsum is compressed into a thin sheet. Applicants respectfully believe that the Examiner's reading of Roth is not well taken since Roth teaches making gypsum flake under compaction. Roth does not teach making wallboard according to his process.

Applicants have made an earnest endeavor to place this application into condition for allowance, and favorable consideration is respectfully requested.

Respectfully submitted,

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